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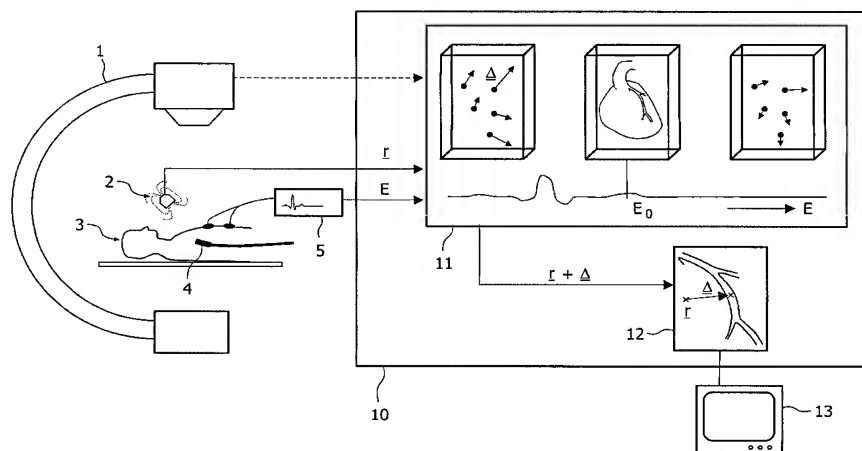
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(54) Title: DEVICE AND METHOD FOR NAVIGATING A CATHETER



(57) Abstract: The invention relates to a device and a method for navigating a catheter in the vessel system or an intervention needle in an organ of a patient that is subject to a spontaneous movement due to heartbeat and/or respiration. In this connection, a movement model (11) that describes the displacement of points in the vessel system with respect to a reference phase ( $E_0$ ) of the spontaneous movement is kept ready in the memory of a data processing device (10). The spatial positions and orientations of the instrument (4) measured by a locating device (2) in the vessel system of the patient (3) and also the ECG values ( $E$ ) recorded in parallel therewith are converted by the data processing device (10) with the aid of the movement model (11) into a movement-compensated position ( $\underline{r} + \Delta$ ) of the instrument that can then be displayed in a static vessel or organ map (12). The movement model (11) can be obtained from a series of three-dimensional recordings of the vessel system. In addition or alternatively, measured positions and orientations of the instrument (4) can be used during times at which the instrument does not travel forwards.

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